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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,090	04/10/2006	Munctaka Watanabe	Q78083	8720

23373 7590 04/30/2007
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EXAMINER

LOPEZ ESQUERRA, ANDRES

ART UNIT	PAPER NUMBER
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2818

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/575,090	Applicant(s) WATANABE, MUNETAKA	
	Examiner Andrés López-Esquerro	Art Unit 2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>04/10/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 8 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 8 limitation is the same as claim 7 from which it is depend upon.

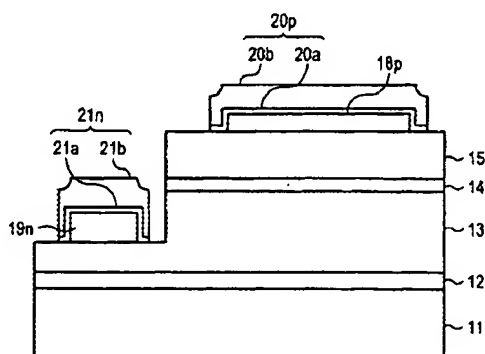
Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. **Claims 1 – 8 and 11 – 23 are rejected under 35 U.S.C. 102(a) as being anticipated by Uemura et al. WO/2002/101841 (Uemura).**



4. As for claims 1 and 14, Uemura discloses and shows in Fig. a gallium nitride base semiconductor light emitting device (LED) of the flip chip type comprising:

a. a substrate (11);

- b. an n-type semiconductor layer (13);
 - c. a light-emitting layer (14);
 - d. a p-type semiconductor layer (15);
 - e. a negative electrode (19n,21n) provided on the n-type semiconductor layer, and;
 - f. a positive electrode (18p,20p) provided on the p-type semiconductor layer, comprising:
 - i. an ohmic electrode (18p);
 - ii. an adhesion (20a), and;
 - iii. a bonding pad layer (20b).
5. For the limitation of "melting point of these layers being lowered in this order" are inherently present since these are characteristic of the materials used, which are, the same as claimed and therefore inherently the same properties are present in the device.
6. As for claims 2 – 3 and 15 – 16, Uemura discloses (US 7,005,684 Col 3 line 39) the use of Rh for the p-side electrode.
7. As for claims 4 – 5 and 17 – 18, Uemura discloses (WO/2002/101841 abstract) the use of Ti for the adhesion layer.
8. As for claims 6, 13 and 19, Uemura discloses (WO/2002/101841 abstract) the use of Au for the bonding pad layer.
9. As for claims 7 – 8 and 20 – 21, Uemura discloses (US 7,005,684 Col 4 lines 24 – 25) that the thickness of the Ti layer is between 10 angstroms to 1000 angstroms.

10. As for claims 11 – 12, Uemura discloses (US 7,005,684 Col 4 line 27) that the thickness of the Au layer is between 1000 angstroms to 500,000 angstroms.

11. As for claims 22 and 23, Uemura discloses (US 7,005,684 Col 7 lines 29 – 37) the use of the flip-chip as the light-emitting portion in an LED structure, which is the same as a lamp.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 9 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uemura.

14. As for claims 9 – 10, Uemura discloses the claimed invention except for the thickness of the electrode to be between 500 angstrom to 2000 angstrom. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have created the thickness of the electrode to be between 500 angstrom to 2000 angstrom, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2004/0149999 and US 7,005,684.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrés López-Esquerro whose telephone number is (571) 272-9753. The examiner can normally be reached on M - Th 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on (571) 272 - 1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andrés López-Esquerro
Examiner
Art Unit 2818

ALE



Andrés López-Esquerro
Primary Examiner